What is claimed is:

1. A power control circuit comprising:

a switching regulator for converting voltage of external electric power into a medium voltage, said switching regulator including a first transistor, a smoothing circuit connected to the first transistor and a first control circuit for controlling switching operation of the first transistor;

a series regulator for converting the medium voltage to a prescribed voltage of output power to be supplied, said series regulator including a second transistor and a second control circuit for controlling conductivity of the second transistor to regulate voltage of the output power to be constant, an overvoltage detecting circuit for detecting an overvoltage of the medium voltage, and an overcurrent detecting circuit for detecting an overcurrent supplied to said series regulator; and

means for operating one of said switching regulator and said series regulator under a protective condition if one of the overvoltage and overcurrent is detected.

2. The power control circuit as claimed in claim 1,

wherein said means turns off the first transistor if the overvoltage detecting circuit detects voltage higher than a prescribed threshold level.

3. The power control circuit as claimed in claim 1,

wherein said means turns off the second transistor if the overvoltage detecting circuit detects voltage higher than a prescribed threshold level.

4. The power control circuit as claimed in claim 1,

wherein said means turns off the first transistor if the overcurrent detecting circuit detects current larger than a prescribed threshold level.

5. The power control circuit as claimed in claim 1,

wherein said means turns off the second transistor if the overcurrent detecting circuit detects current larger than a prescribed threshold level.

6. The power control circuit as claimed in claim 1, further comprising a feedback circuit connected between the overvoltage detecting circuit and the first control circuit,

wherein said overvoltage detecting circuit includes a voltage dividing circuit for dividing an output voltage of said switching regulator, and connected to said feedback circuit.

7. The power control circuit as claimed in claim 1, further comprising an overheat detecting circuit for detecting overheating of the first transistor,

wherein said means operates one of said switching regulator and said series regulator under a protective condition if said overheat detecting circuit detects overheating of the first transistor.

8. The power control circuit as claimed in claim 7, said means operates said first control circuit to turn off the first transistor if said overheat detecting circuit detects the temperature of the first transistor to be higher than a threshold temperature level.

9. The power control circuit as claimed in claim 7, said means operates said second control circuit to turn off the second transistor if said overheat detecting circuit detects the temperature of the first transistor to be higher than a threshold temperature level.

10. The power control circuit as claimed in claim 1, further comprising an overheat detecting circuit for detecting overheating of the first transistor,

wherein said means includes a circuit for interrupting the output power of the first transistor if said overheat detecting circuit detects overheating of the first transistor.

11. The power control circuit as claimed in claim 7,

wherein said overheat detecting circuit comprises a current source and a diode which is disposed near the first transistor and connected to the current source, and

wherein the overheating of the first transistor is detected if the forward voltage of the diode becomes higher than a threshold voltage level.

12. The power control circuit as claimed in claim 1, further comprising an additional series regulator that includes an additional second control circuit.

13. The power control circuit as claimed in claim 12, further comprising an additional overcurrent detecting circuit connected to said additional series regulator.

14. The power control circuit as claimed in claim 1,

wherein the first transistor comprises a MOSFET having a gate, and

wherein the first control circuit comprises a circuit for controlling a duty ratio of the gate voltage of the MOSFET.

15. The power control circuit as claimed in claim 1,

wherein the second transistor comprises a bipolar transistor having a base circuit, and

wherein the second control circuit comprises a circuit for controlling an amount of current flowing through the base circuit of the bipolar transistor.

16. The power control circuit as claimed in claim 1, further comprising an IC chip for accommodating all the elements of said power source.

17. The power control circuit as claimed in claim 1, further comprising an IC chip for accommodating one of the first and second transistors.